



COMBINED TRANSMITTAL OF APPEAL BRIEF TO THE BOARD OF PATENT APPEALS AND INTERFERENCES & PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136(a) (Large Entity)			Docket No. 1518.005	
In Re Application Of: Robert John Colver				
Serial No. 09/601,810		Filing Date 8/3/00		Examiner Nguyen
				Group Art Unit 3637
Invention: MODULAR BUILDING UNIT				
<u>TO THE COMMISSIONER FOR PATENTS:</u>				
This combined Transmittal of Appeal Brief to the Board of Patent Appeals and Interferences and petition for extension of time under 37 CFR 1.136(a) is respectfully submitted by the undersigned:				
 Signature				
Dated: <u>August 3, 2004</u>				
<div>Peter L. Berger, Esq. (Reg. No. 24,570) Levisohn, Berger & Langsam, LLP 805 Third Avenue, 19th Floor New York, New York 10022 Phone (212) 486-7272 Fax (212) 486-0323 Customer No. 04617</div>				
<div><div><p style="text-align: center;">Certificate of Transmission by Facsimile*</p><p>I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (Fax 703-872-9304)</p><p>August 08, 2004 (Date)</p> Signature</div><div><p style="text-align: center;">Wanda Ruggiera</p><p style="text-align: center;">Typed or Printed Name of Person Signing Certificate</p></div></div> <div><p style="text-align: center;">Certificate of Mailing</p><p>I certify that this document and fee is being deposited on _____ with the U.S. Postal Service as first class mail under 37 C.F.R. 1.6 and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.</p><p>_____ Signature of Person Mailing Correspondence</p><p>_____ Typed or Printed Name of Person Mailing Correspondence</p></div>				

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APPEALS AND INTERFERENCES & PETITION FOR EXTENSION OF TIME
UNDER 37 C.F.R. 1.136(a) (Large Entity)**

Docket No.
1518.005

In Re Application Of: **Robert John Colver**

Serial No.
09/601,810

Filing Date
8/3/00

Examiner
Nguyen

Group Art Unit
3637

Invention: **MODULAR BUILDING UNIT**

TO THE COMMISSIONER FOR PATENTS:

This is a combined Transmittal of Appeal Brief to the Board of Patent Appeals and Interferences and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing an Appeal Brief.

Applicant(s) hereby request(s) an extension of time of (check desired time period):

☒ One month ☐ Two months ☐ Three months ☐ Four months ☐ Five months

from: July 4, 2004
Date

until: August 4, 2004
Date

The fee for the Appeal Brief and Extension of Time has been calculated as shown below:

Fee for Appeal Brief: \$330.00

Fee for Extension of Time: \$110.00

TOTAL FEE FOR APPEAL BRIEF AND EXTENSION OF TIME: **\$440.00**

The fee for the Appeal Brief and extension of time is to be paid as follows:

- ☐ A check in the amount of _____ for the Appeal Brief and extension of time is enclosed.
- ☒ Please charge Deposit Account No. **02-2105** in the amount of **\$440.00**
- ☒ The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. **02-2105**
- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.
- ☒ If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. **02-2105**

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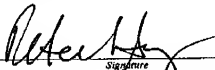
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August 2004
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Wanda Ruggiera

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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re application of: Robert John Colver
Serial No. 09/601,810
Filed August 3, 2000
Group Art Unit: 3637
Examiner: C. Nguyen
For: MODULAR BUILDING UNIT

Docket No. 1518.005

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Alexandria, VA 22313-1450

APPELLANT'S BRIEF

1. Real Party in Interest
Robert John Colver
2. Related Appeals and Interferences
None
3. Status of Claims
Claims 43 to 56 are pending in the Application. All of claims 43 to 56 are rejected. The rejection of all of claims 43 to 56 is appealed.
4. Status of Amendments
The Amendment filed subsequent to the final rejection was not entered.
5. Summary of Invention
The Application is directed to a novel method of forming a module which can be used to form part of a building. An object of the invention is to allow the module to be constructed off-site and also fitted out off-site, then transported to the site and connected with other modules to create the building.
The method must therefore produce a module which meets, at least, the following criteria:
 1. It must be an independent structure which is self-supporting independently of other modules. This is necessary to allow the

module to be formed at one location off-site and then be transported to the site.

2. The module must be capable of fit-out off-site but connection to other modules on site. This requires that the module is formed to define a complete interior and to have an exterior which is connectable to other modules.

To provide a module meeting all these criteria, the inventor developed a structure consisting of a plurality of vertically oriented substantially similar rectangular frame members 4 tied together by runners 6. The rectangular frame members 4 each comprise four frame sections 5: two vertically oriented side frame sections 5a which form part of the side of the module and two horizontally oriented frame sections 5b which form part of the top and bottom of the module.

The inventor viewed the form of construction as somewhat similar to that which is used to create a boat. The hull of a boat can be created by connecting together multiple curved beams with struts extending the length of the hull. The curved beams are generally termed "ribs" and that is why "rib" is used in this Application as an alternative term for the rectangular frame members 4.

The method of forming the module involves firstly creating the rectangular frame members or ribs 4. At least three substantially similar rectangular frame members 4 are formed. At this stage, the three rectangular frame members 4 are separate from each other. The at least three rectangular frame members 4 are then held in an upstanding vertical position spaced from each other by a jig or other suitable device. In this upstanding position, the two side frame sections 5a of each rectangular frame member extend vertically upwards. The other two sections 5b extend horizontally one above the other at a separation determined by the length of other two frame sections to form a top and bottom of the frame member 4.

The row of substantially similar rectangular frame members 4 are then connected together by horizontal runners 6 to form a lattice framework. The

importance of forming a lattice framework is that loads on the module are borne by all the rectangular frame members 4 and not just the rectangular frame members 4 at the ends of the module. (This substantial similarity of substantially equal bearing frames for the load is an important distinction from the prior art which employs conventional corner posts, as will be discussed below.)

Horizontal angle members 10 are then attached to the internal corners of the lattice framework. These corner members 10 rigidify the lattice framework and also help to allow connection of the module to other modules.

Finally, sheeting is attached to the horizontal runners 6 so as to form an enclosure. Since the horizontal runners 6 are internal to the rectangular frame members 4, the enclosure made by the sheeting is suitable for fitting out off-site. Furthermore, the rectangular frame members 4 are still accessible to allow the module to be connected to other modules on site.

6. Issues

The issue presented for review is the rejection of claims 43 to 56 under 35 U.S.C. 103(a) as being unpatentable over Payne (US 5735639) in view of Bowers (US 3605350).

7. Grouping of Claims

All claims are considered grouped together.

8. Argument

As set out above, the method involves the following steps:

1. Formation of at least three substantially similar rectangular frame members 4.
2. Vertical positioning of the at least three substantially similar rectangular frame members 4 in a row.
3. Connection together of the rectangular frame members 4 by internal horizontal runners 6.
4. Addition of corner members 10.
5. Addition of sheeting.

None of the prior art discloses or suggests a method having these steps 1-5. In particular, Payne and Bowers relied on by the examiner disclose modules which are formed by quite different methods.

Payne discloses modules in the form of an elongated box, Figure 2. Each module has a base assembly 32 and an assembly of upstanding walls 34 that is supported on base assembly 32 and a roof assembly 44 that is supported atop the upstanding walls 34, column 5, lines 51 to 56. The base assembly 32 is illustrated in Figure 3. It has a rectangular framework 33 comprising four tubular support members 76, 78, 80 and 82 connected together via corner fittings 56, column 7, lines 4 to 13 and 42 to 50. A corner support member 128, 130, 132 and 134 extends upwardly from each corner fitting, column 8, lines 10 to 28.

The right side wall 36 of each module 30 comprises a rectangular shaped framework 140 as shown in Figure 4, column 8, lines 32 to 36. The left side wall 38 comprises a rectangular shape framework 190 shown in Figure 5, column 8, lines 63 to 66. The front wall 40 comprises a rectangular shape framework shown in Figure 6 and the rear wall 42 comprises a rectangular shaped framework 282 shown in Figure 7, column 9, lines 16 to 19 and 36 to 39. Finally, the roof assembly 44 of each module 30 comprises a rectangular framework 280 shown in Figure 8, column 9, lines 60 to 63. The framework 280 of the roof assembly includes four corner fittings 282.

The module 30 is constructed by first forming each of the base assembly 32, right side wall 36, left side wall 38, front wall 40, rear wall 42 and roof assembly 44. Next, the corner support members 128, 130, 132 and 134 are connected to the corner fittings 56 of the base assembly 32. The roof assembly 44 is then attached by connecting its corner fittings 282 to the corner support members 128, 130, 132 and 134. The right side wall 36, left side wall 38, front wall 40 and rear wall 42 are then connected in place by welding them to the base assembly 32, roof assembly 44 and corner support members 128, 130, 132 and 134.

This method of construction therefore involves formation of a plurality of rectangular frameworks perpendicular to each other as compared to vertically positioning at least three rectangular frame members in a row substantially parallel to each other. As the examiner conceded, the method of Payne does not involve connection of the vertically positioned

rectangular frame members by internal horizontal runners. As a result, and as the examiner also conceded, the module of Payne does not have a lattice framework.

As is also apparent from an inspection of Figures 2-8 of Payne the assembled frame members are not substantially similar to each other because they are not "ribs" for a frame instead they are four sides of a structure.

Still further, construction of the module of Payne does not involve addition of corner members and then addition of sheeting by connection to internal horizontal runners. Therefore, Payne fails to disclose a method having steps 2 to 5 as identified above.

The method of construction of Payne is totally different from that claimed in the present Application and it produces a totally different result in terms of loading. Loads in the module of Payne will be concentrated in the corner support members and not spread throughout the module because the module does not have a lattice framework.

Turning to Bowers, this discloses modules which comprises one half of a single room building. Each module consists of longitudinal lower beams 12 and 14 and upper beams 52 and 54 running between corner posts 18 and 20. The corner posts and longitudinal beams are connected by lower cross beams 16, 22 and also by upper cross beams. A wooden sub-flooring matrix comprises lengthwise stringers 28 and widthwise stringers 30. A wooden sub-roofing matrix comprises plural ladders 64, 66. The three walls are each formed from wooden frameworks consisting of a rectangular frame with vertical studs.

The module of Bowers will apparently be made by first connecting together the lower beams 12, 14 and upper beams 52, 54 with the corner posts. The lower cross beams 16, 22 and upper cross beams will then be added. The sub-flooring matrix and sub-roofing matrix will then be connected in place. Finally, the three walls will be attached.

Thus, exactly like the method of Payne, that of Bowers assembles a module by building perpendicular walls. It does not involve vertically positioning at least three substantially

similar rectangular frame members aligned in a row (parallel to each other) and then connection of the rectangular frame members by internal horizontal runners. As with Payne, there is no formation of a lattice framework and again as with Payne there is no disclosure of addition of corner members to the lattice framework.

Once again, this is a totally different method which achieves a totally different result in terms of loading. With the Bowers module the load will be concentrated in the corner posts rather than spread across the module because there is no overall lattice framework. It would be quite contrary to the teaching of Bowers to provide a lattice framework since it is a critical feature of the invention of Bowers that the module has an open wall side.

Given this fundamental teaching of Bowers, there is absolutely no basis for the view that Bowers would teach modification of the module of Payne by adding horizontal runners to form a lattice framework. On the contrary, Bowers teaches away from forming a lattice framework because it discloses a module with an open side.

The examiner's conclusion that the method is obvious because the structural elements of the module are taught by Payne and Bowers is therefore incorrect. The examiner erred in focusing on the structural parts rather than the method of forming the module. The examiner erred in finding the structural parts in the prior art. In particular, the examiner further erred in failing to even identify at least three substantially similar rectangular frames aligned in parallel and then connected by horizontal runners. Further there are no runners in Bowers.

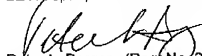
The examiner further erred in his identification of the features of the method. The examiner identified the method as one in which two side walls are secured to corner elements. The claims in this Application do not however define side walls or corner elements. The claims are to forming self-sustaining modules. The examiner ignored the claimed feature of vertically positioning at least three rectangular frame members in a row and then connecting the rectangular frame members by internal horizontal runners.

The present invention provides a simple but effective method of forming a module which has the significant advantage of a lattice framework. Neither Payne nor Bowers discloses a module with a lattice framework. Neither Payne nor Bowers discloses a method of forming a module which will result in a lattice framework. Neither Payne nor Bowers discloses a method having the five steps set out above.

In view of the above all pending claims are patentable, and the Examiner should be overruled.

Respectfully submitted,

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APPENDIX

CLAIMS:

43. (Amended) A method of constructing a building unit module having two pairs of opposing sides, a roof and a floor,

the method comprising forming at least three substantially similar rectangular frame members, positioning the frame members vertically in an aligned row one with the other with a spacing between each adjacent pair of frame members, each of said frame members having a plane formed by the sides of each of said members, each of said opposing sides also comprising planes, each of the planes of said frame members being substantially parallel to each other and perpendicular to the planes of said opposing sides, connecting a plurality of horizontal runners to the frame members with the horizontal runners parallel to each other, extending along one pair of said two pairs of sides with a spacing between each adjacent pair of runners to form a lattice framework, whereby loads on the module are distributed substantially equally throughout the framework, securing horizontal angle members to the internal corners of the lattice framework, and securing sheeting to the lattice framework via the runners so as to form an enclosure.

44. (Amended) A method as claimed in claim 43, wherein said enclosure has four external corners additionally comprising securing horizontal angle members to the four external corners of the lattice framework.

45. (Amended) A method as claimed in claim 43 wherein each frame member is formed by interconnecting four individual frame sections.

46. (Amended) A method unit module as claimed in claim 45 wherein each frame member is formed by welding joists of a C-shaped cross-section.

47. (Amended) A method as claimed in claim 43, further comprising connecting plural parallel cross runners extending widthwise to a rectangular frame member which is endmost.

48. (Amended) A method as claimed in claim 43 wherein the lattice framework is formed of light gauge steel.

49. (Amended) A method of forming a building comprising forming a plurality of modules by the method of claim 43, further comprising the steps of stacking the modules

one atop the other and side by side and interconnecting the modules by connecting the lattice framework of each module to the lattice framework of each adjacent module.

50. (Amended) A method as claimed in claim 43, further comprising a plurality of horizontal runners connected to said short side.

51. (Amended) A method as claimed in claim 43, wherein one of said two pairs of sides is longer than the other of said two pair of sides.

52. (Amended) A method as claimed in claim 51, further comprising also connecting a plurality of horizontal cross runners to the shorter of said pairs of said two pairs of sides.

53. (Amended) A method as claimed in claim 43, wherein the spacing between adjacent pairs of rectangular frame member is substantially equal.

54. (Amended) A method as claimed in claim 43, wherein the spacing between sets of adjacent pairs of horizontal runners is substantially equal.

55. (Amended) A method as claimed in claim 43, wherein said method is practiced at a construction site.

56. (Amended) A method as claimed in claim 43, wherein said method is practiced at a factory for assembling prefabricated building unit modules.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

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1. Real Party in Interest
Robert John Colver
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None
3. Status of Claims
Claims 43 to 56 are pending in the Application. All of claims 43 to 56 are rejected. The rejection of all of claims 43 to 56 is appealed.
4. Status of Amendments
The Amendment filed subsequent to the final rejection was not entered.
5. Summary of Invention

The Application is directed to a novel method of forming a module which can be used to form part of a building. An object of the invention is to allow the module to be constructed off-site and also fitted out off-site, then transported to the site and connected with other modules to create the building.

The method must therefore produce a module which meets, at least, the following criteria:

1. It must be an independent structure which is self-supporting independently of other modules. This is necessary to allow the

- module to be formed at one location off-site and then be transported to the site.
2. The module must be capable of fit-out off-site but connection to other modules on site. This requires that the module is formed to define a complete interior and to have an exterior which is connectable to other modules.

To provide a module meeting all these criteria, the Inventor developed a structure consisting of a plurality of vertically oriented substantially similar rectangular frame members 4 tied together by runners 6. The rectangular frame members 4 each comprise four frame sections 5: two vertically oriented side frame sections 5a which form part of the side of the module and two horizontally oriented frame sections 5b which form part of the top and bottom of the module.

The inventor viewed the form of construction as somewhat similar to that which is used to create a boat. The hull of a boat can be created by connecting together multiple curved beams with struts extending the length of the hull. The curved beams are generally termed "ribs" and that is why "rib" is used in this Application as an alternative term for the rectangular frame members 4.

The method of forming the module involves firstly creating the rectangular frame members or ribs 4. At least three substantially similar rectangular frame members 4 are formed. At this stage, the three rectangular frame members 4 are separate from each other. The at least three rectangular frame members 4 are then held in an upstanding vertical position spaced from each other by a jig or other suitable device. In this upstanding position, the two side frame sections 5a of each rectangular frame member extend vertically upwards. The other two sections 5b extend horizontally one above the other at a separation determined by the length of other two frame sections to form a top and bottom of the frame member 4.

The row of substantially similar rectangular frame members 4 are then connected together by horizontal runners 6 to form a lattice framework. The

importance of forming a lattice framework is that loads on the module are borne by all the rectangular frame members 4 and not just the rectangular frame members 4 at the ends of the module. (This substantial similarity of substantially equal bearing frames for the load is an important distinction from the prior art which employs conventional corner posts, as will be discussed below.)

Horizontal angle members 10 are then attached to the internal corners of the lattice framework. These corner members 10 rigidify the lattice framework and also help to allow connection of the module to other modules.

Finally, sheeting is attached to the horizontal runners 6 so as to form an enclosure. Since the horizontal runners 6 are internal to the rectangular frame members 4, the enclosure made by the sheeting is suitable for fitting out off-site. Furthermore, the rectangular frame members 4 are still accessible to allow the module to be connected to other modules on site.

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The module 30 is constructed by first forming each of the base assembly 32, right side wall 36, left side wall 38, front wall 40, rear wall 42 and roof assembly 44. Next, the corner support members 128, 130, 132 and 134 are connected to the corner fittings 56 of the base assembly 32. The roof assembly 44 is then attached by connecting its corner fittings 282 to the corner support members 128, 130, 132 and 134. The right side wall 36, left side wall 38, front wall 40 and rear wall 42 are then connected in place by welding them to the base assembly 32, roof assembly 44 and corner support members 128, 130, 132 and 134.

This method of construction therefore involves formation of a plurality of rectangular frameworks perpendicular to each other as compared to vertically positioning at least three rectangular frame members in a row substantially parallel to each other. As the examiner conceded, the method of Payne does not involve connection of the vertically positioned

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The module of Bowers will apparently be made by first connecting together the lower beams 12, 14 and upper beams 52, 54 with the corner posts. The lower cross beams 16, 22 and upper cross beams will then be added. The sub-flooring matrix and sub-roofing matrix will then be connected in place. Finally, the three walls will be attached.

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Once again, this is a totally different method which achieves a totally different result in terms of loading. With the Bowers module the load will be concentrated in the corner posts rather than spread across the module because there is no overall lattice framework. It would be quite contrary to the teaching of Bowers to provide a lattice framework since it is a critical feature of the invention of Bowers that the module has an open wall side.

Given this fundamental teaching of Bowers, there is absolutely no basis for the view that Bowers would teach modification of the module of Payne by adding horizontal runners to form a lattice framework. On the contrary, Bowers teaches away from forming a lattice framework because it discloses a module with an open side.

The examiner's conclusion that the method is obvious because the structural elements of the module are taught by Payne and Bowers is therefore incorrect. The examiner erred in focusing on the structural parts rather than the method of forming the module. The examiner erred in finding the structural parts in the prior art. In particular, the examiner further erred in failing to even identify at least three substantially similar rectangular frames aligned in parallel and then connected by horizontal runners. Further there are no runners in Bowers.

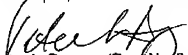
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The present invention provides a simple but effective method of forming a module which has the significant advantage of a lattice framework. Neither Payne nor Bowers discloses a module with a lattice framework. Neither Payne nor Bowers discloses a method of forming a module which will result in a lattice framework. Neither Payne nor Bowers discloses a method having the five steps set out above.

In view of the above all pending claims are patentable, and the Examiner should be overruled.

Respectfully submitted,

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APPENDIX

CLAIMS:

43. (Amended) A method of constructing a building unit module having two pairs of opposing sides, a roof and a floor,

the method comprising forming at least three substantially similar rectangular frame members, positioning the frame members vertically in an aligned row one with the other with a spacing between each adjacent pair of frame members, each of said frame members having a plane formed by the sides of each of said members, each of said opposing sides also comprising planes, each of the planes of said frame members being substantially parallel to each other and perpendicular to the planes of said opposing sides, connecting a plurality of horizontal runners to the frame members with the horizontal runners parallel to each other, extending along one pair of said two pairs of sides with a spacing between each adjacent pair of runners to form a lattice framework, whereby loads on the module are distributed substantially equally throughout the framework, securing horizontal angle members to the internal corners of the lattice framework, and securing sheeting to the lattice framework via the runners so as to form an enclosure.

44. (Amended) A method as claimed in claim 43, wherein said enclosure has four external corners additionally comprising securing horizontal angle members to the four external corners of the lattice framework.

45. (Amended) A method as claimed in claim 43 wherein each frame member is formed by interconnecting four individual frame sections.

46. (Amended) A method unit module as claimed in claim 45 wherein each frame member is formed by welding joists of a C-shaped cross-section.

47. (Amended) A method as claimed in claim 43, further comprising connecting plural parallel cross runners extending widthwise to a rectangular frame member which is endmost.

48. (Amended) A method as claimed in claim 43 wherein the lattice framework is formed of light gauge steel.

49. (Amended) A method of forming a building comprising forming a plurality of modules by the method of claim 43, further comprising the steps of stacking the modules

one atop the other and side by side and interconnecting the modules by connecting the lattice framework of each module to the lattice framework of each adjacent module.

50. (Amended) A method as claimed in claim 43, further comprising a plurality of horizontal runners connected to said short side.

51. (Amended) A method as claimed in claim 43, wherein one of said two pairs of sides is longer than the other of said two pair of sides.

52. (Amended) A method as claimed in claim 51, further comprising also connecting a plurality of horizontal cross runners to the shorter of said pairs of said two pairs of sides.

53. (Amended) A method as claimed in claim 43, wherein the spacing between adjacent pairs of rectangular frame member is substantially equal.

54. (Amended) A method as claimed in claim 43, wherein the spacing between sets of adjacent pairs of horizontal runners is substantially equal.

55. (Amended) A method as claimed in claim 43, wherein said method is practiced at a construction site.

56. (Amended) A method as claimed in claim 43, wherein said method is practiced at a factory for assembling prefabricated building unit modules.

COPY

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re application of: Robert John Colver
Serial No. 09/601,810
Filed August 3, 2000
Group Art Unit: 3637
Examiner: C. Nguyen
For: MODULAR BUILDING UNIT

Docket No. 1518.005

August 3, 2004

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APPELLANT'S BRIEF

1. Real Party in Interest
Robert John Colver
2. Related Appeals and Interferences
None
3. Status of Claims
Claims 43 to 56 are pending in the Application. All of claims 43 to 56 are rejected. The rejection of all of claims 43 to 56 is appealed.
4. Status of Amendments
The Amendment filed subsequent to the final rejection was not entered.
5. Summary of Invention
The Application is directed to a novel method of forming a module which can be used to form part of a building. An object of the invention is to allow the module to be constructed off-site and also fitted out off-site, then transported to the site and connected with other modules to create the building.
The method must therefore produce a module which meets, at least, the following criteria:
 1. It must be an independent structure which is self-supporting independently of other modules. This is necessary to allow the

- module to be formed at one location off-site and then be transported to the site.
2. The module must be capable of fit-out off-site but connection to other modules on site. This requires that the module is formed to define a complete interior and to have an exterior which is connectable to other modules.

To provide a module meeting all these criteria, the inventor developed a structure consisting of a plurality of vertically oriented substantially similar rectangular frame members 4 tied together by runners 6. The rectangular frame members 4 each comprise four frame sections 5: two vertically oriented side frame sections 5a which form part of the side of the module and two horizontally oriented frame sections 5b which form part of the top and bottom of the module.

The inventor viewed the form of construction as somewhat similar to that which is used to create a boat. The hull of a boat can be created by connecting together multiple curved beams with struts extending the length of the hull. The curved beams are generally termed "ribs" and that is why "rib" is used in this Application as an alternative term for the rectangular frame members 4.

The method of forming the module involves firstly creating the rectangular frame members or ribs 4. At least three substantially similar rectangular frame members 4 are formed. At this stage, the three rectangular frame members 4 are separate from each other. The at least three rectangular frame members 4 are then held in an upstanding vertical position spaced from each other by a jig or other suitable device. In this upstanding position, the two side frame sections 5a of each rectangular frame member extend vertically upwards. The other two sections 5b extend horizontally one above the other at a separation determined by the length of other two frame sections to form a top and bottom of the frame member 4.

The row of substantially similar rectangular frame members 4 are then connected together by horizontal runners 6 to form a lattice framework. The

Importance of forming a lattice framework is that loads on the module are borne by all the rectangular frame members 4 and not just the rectangular frame members 4 at the ends of the module. (This substantial similarity of substantially equal bearing frames for the load is an important distinction from the prior art which employs conventional corner posts, as will be discussed below.)

Horizontal angle members 10 are then attached to the internal corners of the lattice framework. These corner members 10 rigidify the lattice framework and also help to allow connection of the module to other modules.

Finally, sheeting is attached to the horizontal runners 6 so as to form an enclosure. Since the horizontal runners 6 are internal to the rectangular frame members 4, the enclosure made by the sheeting is suitable for fitting out off-site. Furthermore, the rectangular frame members 4 are still accessible to allow the module to be connected to other modules on site.

6. Issues

The issue presented for review is the rejection of claims 43 to 56 under 35 U.S.C. 103(a) as being unpatentable over Payne (US 5735639) in view of Bowers (US 3605350).

7. Grouping of Claims

All claims are considered grouped together.

8. Argument

As set out above, the method involves the following steps:

1. Formation of at least three substantially similar rectangular frame members 4.
2. Vertical positioning of the at least three substantially similar rectangular frame members 4 in a row.
3. Connection together of the rectangular frame members 4 by internal horizontal runners 6.
4. Addition of corner members 10.
5. Addition of sheeting.

None of the prior art discloses or suggests a method having these steps 1-5. In particular, Payne and Bowers relied on by the examiner disclose modules which are formed by quite different methods.

Payne discloses modules in the form of an elongated box, Figure 2. Each module has a base assembly 32 and an assembly of upstanding walls 34 that is supported on base assembly 32 and a roof assembly 44 that is supported atop the upstanding walls 34, column 5, lines 51 to 56. The base assembly 32 is illustrated in Figure 3. It has a rectangular framework 33 comprising four tubular support members 76, 78, 80 and 82 connected together via corner fittings 56, column 7, lines 4 to 13 and 42 to 50. A corner support member 128, 130, 132 and 134 extends upwardly from each corner fitting, column 8, lines 10 to 28.

The right side wall 36 of each module 30 comprises a rectangular shaped framework 140 as shown in Figure 4, column 8, lines 32 to 36. The left side wall 38 comprises a rectangular shape framework 190 shown in Figure 5, column 8, lines 63 to 66. The front wall 40 comprises a rectangular shape framework shown in Figure 6 and the rear wall 42 comprises a rectangular shaped framework 262 shown in Figure 7, column 9, lines 16 to 19 and 36 to 39. Finally, the roof assembly 44 of each module 30 comprises a rectangular framework 280 shown in Figure 8, column 9, lines 60 to 63. The framework 280 of the roof assembly includes four corner fittings 282.

The module 30 is constructed by first forming each of the base assembly 32, right side wall 36, left side wall 38, front wall 40, rear wall 42 and roof assembly 44. Next, the corner support members 128, 130, 132 and 134 are connected to the corner fittings 56 of the base assembly 32. The roof assembly 44 is then attached by connecting its corner fittings 282 to the corner support members 128, 130, 132 and 134. The right side wall 36, left side wall 38, front wall 40 and rear wall 42 are then connected in place by welding them to the base assembly 32, roof assembly 44 and corner support members 128, 130, 132 and 134.

This method of construction therefore involves formation of a plurality of rectangular frameworks perpendicular to each other as compared to vertically positioning at least three rectangular frame members in a row substantially parallel to each other. As the examiner conceded, the method of Payne does not involve connection of the vertically positioned

rectangular frame members by internal horizontal runners. As a result, and as the examiner also conceded, the module of Payne does not have a lattice framework.

As is also apparent from an inspection of Figures 2-8 of Payne the assembled frame members are not substantially similar to each other because they are not "ribs" for a frame instead they are four sides of a structure.

Still further, construction of the module of Payne does not involve addition of corner members and then addition of sheeting by connection to internal horizontal runners. Therefore, Payne fails to disclose a method having steps 2 to 5 as identified above.

The method of construction of Payne is totally different from that claimed in the present Application and it produces a totally different result in terms of loading. Loads in the module of Payne will be concentrated in the corner support members and not spread throughout the module because the module does not have a lattice framework.

Turning to Bowers, this discloses modules which comprises one half of a single room building. Each module consists of longitudinal lower beams 12 and 14 and upper beams 52 and 54 running between corner posts 18 and 20. The corner posts and longitudinal beams are connected by lower cross beams 16, 22 and also by upper cross beams. A wooden sub-flooring matrix comprises lengthwise stringers 28 and widthwise stringers 30. A wooden sub-roofing matrix comprises plural ladders 64, 66. The three walls are each formed from wooden frameworks consisting of a rectangular frame with vertical studs.

The module of Bowers will apparently be made by first connecting together the lower beams 12, 14 and upper beams 52, 54 with the corner posts. The lower cross beams 16, 22 and upper cross beams will then be added. The sub-flooring matrix and sub-roofing matrix will then be connected in place. Finally, the three walls will be attached.

Thus, exactly like the method of Payne, that of Bowers assembles a module by building perpendicular walls. It does not involve vertically positioning at least three substantially

similar rectangular frame members aligned in a row (parallel to each other) and then connection of the rectangular frame members by internal horizontal runners. As with Payne, there is no formation of a lattice framework and again as with Payne there is no disclosure of addition of corner members to the lattice framework.

Once again, this is a totally different method which achieves a totally different result in terms of loading. With the Bowers module the load will be concentrated in the corner posts rather than spread across the module because there is no overall lattice framework. It would be quite contrary to the teaching of Bowers to provide a lattice framework since it is a critical feature of the invention of Bowers that the module has an open wall side.

Given this fundamental teaching of Bowers, there is absolutely no basis for the view that Bowers would teach modification of the module of Payne by adding horizontal runners to form a lattice framework. On the contrary, Bowers teaches away from forming a lattice framework because it discloses a module with an open side.

The examiner's conclusion that the method is obvious because the structural elements of the module are taught by Payne and Bowers is therefore incorrect. The examiner erred in focusing on the structural parts rather than the method of forming the module. The examiner erred in finding the structural parts in the prior art. In particular, the examiner further erred in failing to even identify at least three substantially similar rectangular frames aligned in parallel and then connected by horizontal runners. Further there are no runners in Bowers.

The examiner further erred in his identification of the features of the method. The examiner identified the method as one in which two side walls are secured to corner elements. The claims in this Application do not however define side walls or corner elements. The claims are to forming self-sustaining modules. The examiner ignored the claimed feature of vertically positioning at least three rectangular frame members in a row and then connecting the rectangular frame members by internal horizontal runners.

The present invention provides a simple but effective method of forming a module which has the significant advantage of a lattice framework. Neither Payne nor Bowers discloses a module with a lattice framework. Neither Payne nor Bowers discloses a method of forming a module which will result in a lattice framework. Neither Payne nor Bowers discloses a method having the five steps set out above.

In view of the above all pending claims are patentable, and the Examiner should be overruled.

Respectfully submitted,

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APPENDIX

CLAIMS:

43. (Amended) A method of constructing a building unit module having two pairs of opposing sides, a roof and a floor,

the method comprising forming at least three substantially similar rectangular frame members, positioning the frame members vertically in an aligned row one with the other with a spacing between each adjacent pair of frame members, each of said frame members having a plane formed by the sides of each of said members, each of said opposing sides also comprising planes, each of the planes of said frame members being substantially parallel to each other and perpendicular to the planes of said opposing sides, connecting a plurality of horizontal runners to the frame members with the horizontal runners parallel to each other, extending along one pair of said two pairs of sides with a spacing between each adjacent pair of runners to form a lattice framework, whereby loads on the module are distributed substantially equally throughout the framework, securing horizontal angle members to the internal corners of the lattice framework, and securing sheeting to the lattice framework via the runners so as to form an enclosure.

44. (Amended) A method as claimed in claim 43, wherein said enclosure has four external corners additionally comprising securing horizontal angle members to the four external corners of the lattice framework.

45. (Amended) A method as claimed in claim 43 wherein each frame member is formed by interconnecting four individual frame sections.

46. (Amended) A method unit module as claimed in claim 45 wherein each frame member is formed by welding joists of a C-shaped cross-section.

47. (Amended) A method as claimed in claim 43, further comprising connecting plural parallel cross runners extending widthwise to a rectangular frame member which is endmost.

48. (Amended) A method as claimed in claim 43 wherein the lattice framework is formed of light gauge steel.

49. (Amended) A method of forming a building comprising forming a plurality of modules by the method of claim 43, further comprising the steps of stacking the modules

one atop the other and side by side and interconnecting the modules by connecting the lattice framework of each module to the lattice framework of each adjacent module.

50. (Amended) A method as claimed in claim 43, further comprising a plurality of horizontal runners connected to said short side.

51. (Amended) A method as claimed in claim 43, wherein one of said two pairs of sides is longer than the other of said two pair of sides.

52. (Amended) A method as claimed in claim 51, further comprising also connecting a plurality of horizontal cross runners to the shorter of said pairs of said two pairs of sides.

53. (Amended) A method as claimed in claim 43, wherein the spacing between adjacent pairs of rectangular frame member is substantially equal.

54. (Amended) A method as claimed in claim 43, wherein the spacing between sets of adjacent pairs of horizontal runners is substantially equal.

55. (Amended) A method as claimed in claim 43, wherein said method is practiced at a construction site.

56. (Amended) A method as claimed in claim 43, wherein said method is practiced at a factory for assembling prefabricated building unit modules.